

AMENDMENTS TO THE SPECIFICATION

Please delete paragraph [0049]

Please replace paragraph [0088] with the following amended paragraph:

[0088] In one exemplary embodiment, the electronic devices 1000 include a laser 1002, such as a semiconductor laser, or other optical signal source. With regard to devices such as laser 1002, at least, cooling device 900 is positioned and configured to ensure that laser 1002 is maintained in a desired position and orientation. By way of example, in some embodiments of the invention, cooling device 900 is positioned so that an emitting surface of laser 1002 ~~102~~ is positioned at, and aligned with, a longitudinal axis A-A of header assembly 700 (Figure 4C).

Please replace paragraph [0090] with the following amended paragraph:

[0090] In at least some of those embodiments where a laser 1002 is employed, a photodiode 1004 and thermistor 1006 are also mounted on, or proximate to, submount 902 of cooling device 900. In general, photodiode 1004 is optically coupled with laser 1002 such that photodiode 1004 receives at least a portion of the light emitted by laser 1002, and thereby aids in gathering light intensity data concerning laser 1002 emissions. Further, thermistor 1006 is thermally coupled with laser 1002 ~~1004~~, thus permitting the gathering of data concerning the temperature of laser 1002. There may also be a wavelength locking circuit having two separate photodiodes with different wavelength-sensitive responses, which is known as a wavelocker.

Please replace paragraph [0118] with the following amended paragraph:

[0118] Directing attention now to Figure 5, the illustration shows an EML ~~2460~~ implemented in a transistor header 2102 wherein the transistor header 2102 is implemented in an optical subassembly 2100. The EML optical subassembly 2100 may be later installed in other components such as a pluggable transceiver module or any other suitable device. The EML optical subassembly 2100 incorporates a transistor header 2102 with a collimating lens assembly 2104, an isolator 2106, and a receptacle 2110.

Please replace paragraph [0120] with the following amended paragraph:

[0120] In one embodiment of the invention, internal to the casing 2108 and disposed in the transistor header 2102 is a laser diode ~~2160~~. The laser diode ~~2160~~ may be any laser suitable for the particular application. For example, in a DWDM network, it may be desirable to use EMLs to take advantage of their narrow line width and low chirp values. In applications where precise wavelength control is not required, other types of lasers such as DFB lasers may be used. Alternatively, when the subassembly 2100 is intended to be used as a receiver, a photodiode such as an APD or pin diode or any other suitable diode may be used.

Please replace paragraph [0121] with the following amended paragraph:

[0121] A collimating lens assembly 2104 is optically coupled to the laser diode ~~2160~~. The collimating lens assembly 2104 may be any suitable combination of lenses adapted to focus light from the laser diode ~~2160~~ such that the light can be further propagated in a fiber optic network. In a receiver application when a photo diode is used, the collimating lens assembly 2104 is adapted to focus light from the fiber optic network onto the photo diode.

Please replace paragraph [0122] with the following amended paragraph:

[0122] The isolator 2106 is adapted to prevent back reflection of light into the laser diode ~~2160~~. Back-reflections are generally caused when light travels from a medium having a first index of refraction into a medium with a second, different index of refraction. Reflections back into a laser look like another cavity of the laser other than the primary, and destabilize the amplitude and wavelength of the laser light. Certain standards have been developed that specify acceptable amounts of back-reflection. For example, SONET specifications require that a receiver have a back-reflection ratio no greater than -27dB. Other techniques can be used at the receiver to reduce optical return loss or back reflections, including a variety of index matching and anti-reflection techniques, such as a combination of fiber stubs, angle polished fibers or stubs, anti-reflection coatings, and glass plates.